

ment of new branches. Some of the lowest animals, however, the polyps for instance, increase in a somewhat analogous manner, (§ 329, 330.)

56. In the effects they produce upon the air by respiration, there is an important difference. Animals consume the oxygen, and give out carbonic acid gas, which is destructive to animal life; while plants, by respiration, which they in most instances perform by means of the leaves, reverse the process, and thus furnish oxygen, which is so essential to animals. If an animal be confined in a small portion of air, or water containing air, this soon becomes so vitiated by respiration, as to be unfit to sustain life; but if living plants are enclosed with the animal at the same time, the air is maintained pure, and no difficulty is experienced. The practical effect of this compensation, in the economy of Nature, is obviously most important; vegetation restoring to the atmosphere what is consumed by animal respiration, combustion, &c., and *vice versa*.

57. But there are two things which, more than all others, distinguish the animal from the plant, namely, the power of moving itself or its parts at will, and the power of perceiving other objects or their influences; in other words, *voluntary motion* and *sensation*.

58. All animals are susceptible of undergoing pleasure and pain. Plants have also a certain sensibility. They wither and fade under a burning sun, or when deprived of moisture; and they die when subjected to too great a degree of cold, or to the action of poisons. But they have no consciousness of these influences, and suffer no pain; while animals under similar circumstances suffer. Hence they have been called *animate beings*, in opposition to plants, which are *inanimate beings*.